

## REMARKS

### Claims

Claims 1–4, 6–14 and 21–22 and 24–28 are under examination with claims 5 and 15–20 withdrawn from consideration due to restriction/election. Claim 23 is cancelled without prejudice or disclaimer.

### Claim amendments

The amendment of claim 1 and claim 28 is supported by the disclosure contained in, for example, the paragraph bridging pages 12 and 13 of the originally-filed specification. See, “enzymatic activity.” See also, page 1, ¶1 and page 2, lines 3–5 of the originally-filed specification for a description of said activity (i.e., “enzymes having histone deacetylase activity” carry out “removal of acetyl groups”).

Claim 1 further incorporates the element(s) of claim 22. Amended claim 22 recites additional aspect(s) of Applicants’ invention. Support for the amendment can be found in, for example, the disclosure contained in Example 2 of the originally-filed specification.

The amendment of claims 6 and 12 is self-explanatory.

Amended claim 10 is supported by the disclosure contained in, for example, page 13, ¶3 (see, lines 12–14 at page 13) of the originally-filed specification.

It is respectfully submitted that the amendments presented herein do not raise new matter.

Moreover, the claim amendments do not impose any additional search burden on the Examiner. Entry thereof is cordially requested.

### Rejection under §112, ¶2

The Examiner is thanked for his careful review of the claims.

With respect to the rejection of claim 1 under this section, it is respectfully submitted that the rejection is moot in view of the amendments (i.e., claim 22 was not rejected and the substance of claim 22 is incorporated into amended claim 1).

The aforementioned arguments and amendments render the rejection of claims 10, 23 and 27 under §112, ¶2 moot. Claim 10 has been amended as per the Examiner’s suggestion. Claim 23 is now cancelled and claim 27 is made dependent on claim 11.

Withdrawal of the rejection is respectfully requested.

**Rejection under §112, ¶1 (new matter)**

Applicants respectfully disagree with the PTO's contention that the claim term "catalytic" (as used in claim 28) constitutes new matter. Insofar as a skilled worker expressly understands the meaning/activity of HDAC molecules of present invention to encompass such activities (i.e., participate in the *catalysis* of a specific and well-defined biochemical process), it is respectfully submitted that this contention is without merit. However, in order to facilitate prosecution, the claim has been amended. The PTO is cordially requested to review the "RESULTS" section of Applicants' specification for further understanding of the claimed aspect(s). Withdrawal of the rejection is respectfully requested.

**Rejection under §102(b)**

Claims 1–4 and 6–14 stand rejected under §102(b) as allegedly being anticipated by MacLeod (WO 00/71703). Applicants respectfully traverse this rejection.

MacLeod is drawn to inhibition of HDAC at the nucleic acid level. See, page 3, lines 2–5 of MacLeod et al. Example 2 of MacLeod discloses inhibition of HDAC activity using "antisense oligonucleotides." The disclosure in Example 3, which the Office Action relies on in levying the rejection, is directed to the use of "second generation antisense oligonucleotides." These so-called the second generation oligonucleotides comprise "phosphothionate linkers." The cited reference fails to mention any inhibitor, let alone an HDAC inhibitor which inhibits the enzymatic activity of HDAC. See, amended claim 1. As such, MacLeod cannot anticipate what is claimed by the instant invention. Moreover, in view of the skilled worker's understanding of the limitations of RNA anti-sense technology (for example, with respect to its inability to fully block the activity of a target protein), it is earnestly submitted that MacLeod's antisense oligonucleotides cannot render obvious what is claimed herein. See, for example the enclosed Wikipedia article on Antisense RNA (Exhibit A) and the cited reference by Dias et al. ("Antisense Oligonucleotides: Basic Concepts and Mechanisms." Columbia University, New York, New York 10032).

Since all material elements of the claims are not disclosed in the cited reference, the teachings of MacLeod cannot anticipate or render obvious the methods taught by the instant invention. Withdrawal of the rejection is respectfully requested.

All the rejections should therefore be withdrawn.

In view of the above remarks, favorable reconsideration is courteously requested. If there are any remaining issues which could be expedited by a telephone conference, the Examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response to Deposit Account No. 13-3402.

Respectfully submitted,

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